Bosch Video Management System 5.5

www.boschsecurity.com

BOSCH
Invented for life

- Best in class integration of Bosch CCTV devices and UL intrusion panels
- Highest resilience to ensure continuous operation
- Superior alarm handling with alarm priorities and selectable user group distribution
- Edge based intelligent Video Analytics (IVA) and forensic search
- Support of 3rd party cameras via RTSP, HTTP, MJPEG, ONVIF Profile S

The Bosch Video Management System is a unique enterprise IP video security solution that provides seamless management of digital video, audio, and data across any IP network. It provides the best VMS to go with Bosch CCTV devices, leveraging the unique capabilities of Bosch cameras and recording solutions. It nevertheless offers interfaces and standards to integrate other systems and manufacturers.
The system is equipped with a unique embedded resilience.
It keeps operations up and running even when both, Management and Recording Servers fail.
On edge intelligent Video Analyses and the unmatched recording technology managing up to 2000 cameras with a single server dramatically reduces the total cost of ownership.
The Bosch Video Management System allows a very flexible system design:

- Professional: Single Site System
  1 to 2000 cameras out of the box.
  Only this system supports BIS-BVMS connectivity.
- Enterprise System: Supporting multi-site requirements for Metro, Airport and other large industrial facilities across different time zones. Supports controlled monitoring across different legal entities. Monitoring of up to 10,000 cameras across 10 subsystems per user group resulting in 200,000 cameras in total.
  Up to 30 subsystems per user group for <100 cameras per subsystem, allowing each operator to access up to 30 Management Server computers simultaneously.

The Bosch Video Management System is installed on a Microsoft Windows Operating System.
We recommend using Bosch Workstations and Servers. They are fully tested and optimized for Bosch Video Management System.
In addition to the Bosch ST standard terms and conditions of sale, the Bosch Software Maintenance Agreement is a great option to keep the VMS always up-to date.
It can be found in the online CCTV product catalog.

System overview

Software components

- Management Server software provides management, monitoring, and control of the entire system. One single Management Server manages up to 2000 cameras/encoders.
- Enterprise Management Server provides access to multiple Management Servers

- Video Recording Manager (VRM) provides recording and playback management of video, audio, and data. One single VRM manages up to 2000 cameras/ encoders.
- Configuration Client software provides the straight forward user interface for system configuration and management
- Config Wizard software provides easy and fast setup of a small recording system when using the Bosch VMS Appliance.
- Bosch VMS Appliance: DIVAR IP 3000/7000 is a simple and reliable all-in-one recording, viewing, and management solution for network surveillance systems with 32 channels pre-licensed.
- Operator Client software provides the ergonomic and intuitive user interface for system monitoring and operation.
- Mobile Video Service provides a transcoding service. It transcodes the live and recorded video stream from a configured camera according to the available network bandwidth. This service enables video clients to view high-quality images via low bandwidth.
- Mobile App (iPhone or iPad): Access live and playback video from remote in single or quad-view. Alert and share live video from mobile camera with other security staff with a single click. App available in AppStore.
- Web Client: Access live and playback video from remote in single or quad-view. Search for text data and trigger export of videos on Management Server.
- Bosch Video Streaming Gateway: Bosch cameras, ONVIF cameras, JPEG cameras, RTSP encoders.

Bosch Video Recording Manager (VRM) provides a Distributed Network Video Recorder solution, eliminating the need for dedicated NVRs.
The usage of multiple client Workstations offers great scalability.

Functions

Embedded Resilience

- An Offline Client ensures continuous operation for live, playback and export while Management Server is disconnected.

Video Recording Manager (VRM)

VRM provides load balancing and failover for the iSCSI Storage System and makes it easy to add additional iSCSI Storage Systems later on. VRM introduces the concept of a storage virtualization layer. This abstraction layer enables VRM to manage all of the individual disk arrays in the entire system as various “virtual” pools of storage, which are intelligently allocated as needed.
A storage pool is a container for one or more iSCSI storage systems that share the same load balancing properties.
Dual / failover recording:

- A Primary VRM manages the normal recording of the cameras of your system. You use a Secondary VRM to achieve dual recording of your cameras.
  Dual recording allows you to record video data from the same camera to different locations.
  A Secondary VRM can manage the secondary recording for multiple Primary VRMs.
  A Failover VRM is used for continuing the recording of a failed Primary VRM or a failed Secondary VRM computer.

Bosch VMS furthermore supports Live and Playback of the following recording engines:

- DIVAR IP series, Local Storage, Direct iSCSI recording; Bosch Recording Station (BRS), Video Streaming Gateway (VSG).

For legacy purposes the following recording engines are supported: DVR, DiBos, VIDOS (Live only).

Cameras

- Supports Bosch MPEG-4 & H.264 encoders, MPEG-4 & H.264 IP cameras and IP AutoDome cameras in SD & HD format, decoders, DVRs, Allegiant, Bosch Recording Station (BRS)/DiBos, Bosch POS/ATM Bridge, and DiBos-compatible ATM Bridge
- Supported HD resolutions: 720p and 1080p, 5, 8 and 12 Megapixel
- Intelligent Video Analysis (IVA) and Forensic Search
- Automated Network Replenishment (ANR)
- Regions of Interest
- Intelligent tracking
- Quality settings attuned to each camera type. Refer to data sheets of the cameras for further details.
- Support of 3rd party cameras via RTSP, MJPEG or ONVIF Profile S

Deployment

- Updates of Operator Client and Configuration Client automatically deployed from Management Server
- One-click hotfix deployment
- New Setup: Internet Information Service is configured automatically for use with Mobile Video Service, enter the desired number of VSG instances, perform an update installation with a very few clicks.

Configuration

- Generic camera connection
  Bosch VMS retrieves the values of currently known functions on connection to unknown Bosch IP cameras/encoders. It is thus not required to upgrade to new Bosch VMS version to connect new camera models in the future.
  Valid for firmware 5.70 or later
- Automatic scan of IP devices
- Automatic IP address assignment of IP devices
- Configurable Logical Tree
- Device states indicated by icons, including network connection loss, video loss, and camera de-adjustment
- Batch firmware updates of IP devices

Scheduling

- Up to 10 Recording Schedules with Holidays and Exception Days
- Task Schedules with Holidays, Exception Days, and recurring schedule support
- Per camera settings for minimum and maximum recording times

- Per camera, per recording schedule frame rate and quality settings for live, normal recording, motion recording, and alarm recording

Event handling
- Compound events (combining events with Boolean logic)
- Event duplication allowing separate handling
- Event assignment to user groups
- Schedule dependent event logging
- Schedule dependent event-triggered Command Script invocation
- 4 configurable user-events (can be triggered via menu command)
- Mapping of ONVIF events to Bosch VMS events. ONVIF events can then trigger Bosch VMS alarms and recording.

Alarm configuration
- Schedule dependent alarm generation
- Alarms can trigger alarm-mode recording for any cameras.
- 100 alarm priorities can be defined.
- Occurrence of text data can trigger alarm recording.

Sequences
- Pre-configured camera sequences with 25 cameras with each up to 100 steps with individual dwell times.
- “Automatic Sequences” created by multiple selection and drag and drop to Image panes.

User Management
- LDAP compatible for integration with user management systems such as Microsoft Active Directory
- Access to system resources individually controlled per user group
- Logical Tree customized per user group – users only see devices for which they have access
- User group rights for protecting, deleting, exporting, and printing video
- User group rights for Logbook access
- User group priority assignment for PTZ control and Allegiant camera access
- Individual per-camera privileges assignable per user group for live access, playback, audio, text data display, PTZ control
- Dual-authorization logon – special privileges and priorities granted when two users log on together

Efficient operation
Bosch VMS puts a strong emphasis to efficient operation, which consists of several disciplines:

Equipment:
- Workstations are protected by an Inactivity logoff during the absence of the operator.
- Up to 4 PC monitors supported per Workstation. Arbitrary number of Bosch Monitor Walls or a Barco Monitor Wall (Transform N-series) may be used in addition.
- KBD Universal XF keyboard supported, connected to Workstation via USB interface
- KBD Universal XF keyboard supports Enterprise System (select the desired Management Server)
- Bosch IntuiKey keyboard supported, connected to either Workstation or IP decoder
- Bosch IntuiKey keyboard supports Enterprise System (select the desired Management Server)

Intuitive operation:
- A unique flexible Image window (patent pending) allows any combination of video window sizes and layouts without the need of pre-configured layouts
- Any live Image pane can be switched to instant playback (not valid for transcoded streams)
- Multiple instant playback Image panes
- Image panes can display live video, instant playback video, text documents, maps, or web pages
- Camera selection by double-click or drag and drop from site maps, Logical Tree, or Favorites Tree
- Decoders can be organized in Monitor Walls from within Operator Client Monitor Walls can be controlled without connection to Management Server
- Control of analog monitors connected to decoders via drag and drop

Efficient surveillance:
- Favorites tree can be individually configured per user
- Call up Favorites with a click. Include complete views with Image pane layouts and camera assignments
- Intelligent tracking enables the camera to assist the operator by following an automatically or manually selected object (PTZ camera or fixed cameras).
- Zoomable sitemaps with links, devices, sequences, and Command Scripts provide excellent overview
- Automatic map positioning of a camera in a map when this camera is selected
- Two audio listening options – selected channel only, or multiple simultaneous channels
- Audio Intercom functionality
- When operating from a remote access, the operator can retrieve Live and Playback via low bandwidth using transcoded video or TCP for reliable connection (Live Mode). Using Region of Interest further saves network bandwidth when zooming into a section of the camera image.

Efficient response:
- IVA is state-of-the-art intelligent video analysis that reliably detects, tracks, and analyzes moving objects while suppressing unwanted alarms from spurious sources in the image.
- Priority threshold defined for each operator group for escalation management
- Selective auto-popup on alarm
- Alarms displayed in separate alarm window
- Up to 5 Image panes per alarm with live or playback video, sitemaps, documents, or web pages displayed in an “alarm row”, with highest priority alarms on top
- Audio file per alarm
- Workflow with user instructions and user comments, optionally forced before clearing
- Email or SMS notification on alarm
- Alarm display on Monitor Wall
- Alarm auto clear options either time or state dependent

Efficient investigation:
- Forensic Search allows the usage of Intelligent Video Analysis (IVA) algorithms on the recorded video
- Motion search in recordings allows easy locating of changes in selected areas
- Sophisticated multi-camera Timeline allows easy, graphical searching of recorded video
- Bookmarks in Live and Playback Mode for easy investigation and export of recordings
- Selected clips can be exported to DVD, network drives, or USB sticks with a few mouse clicks
- The operator can search for text data to quickly find the corresponding recordings.
- Text data is delivered by systems like foyer card readers, automatic teller machines, point of sales, petrol stations or Automatic Number Plate Recognition.
  Text data contains textual transaction data like account numbers and bank routing codes. The text data is stored within the Logbook as well as in the recordings.

System Monitoring
- System-wide health monitoring, including Bosch cameras, computers, and software.
- Network equipment and other third-party devices monitored with SNMP.
- SNMP monitoring on the Management Server computer provides monitoring information to other Management Systems.

Customization and Interfacing
- Server SDK controls and monitors Bosch VMS Management Server by scripts and external applications.
- Client SDK controls and monitors Bosch VMS Operator Client by external applications and scripts (part of the related server configuration).
- Client Multisite SDK controls and monitors Bosch VMS Operator Client of an Enterprise System by external applications.
- Cameo SDK easily embeds the content of the Bosch VMS Image pane into clients of 3rd party Physical Security Information Management (PSIM) and other management systems.
  For each Cameo SDK instance you need a Workstation license.
- Custom Command Scripts can control all system functionality.
- Powerful built in Command Script editor supports C# and Visual Basic .Net.
- External software can trigger events and send text data via virtual inputs.
- Any .Net programming language (for example C#) can be used to interface Bosch VMS functionalities.
- Other systems can control a virtual matrix with Allegiant CCL commands that can be sent via RS232.
- Compatible with Advantech ADAM-6000 series Digital Input / Output modules.
- Compatible with Bosch Building Integration System.
- Compatible with intrusion panels from Bosch.

Parts included

- The Base Box is delivered with DVD and Quick Start Manual.
- The DVD contains the following items:
  - Installation program that can selectively install all components (Management Server, Video Recording Manager, Configuration Client, Operator Client, Video Streaming Gateway, Mobile Video Services, Bosch VMS SDK, Cameo SDK) in all supported languages
  - Configuration Manual (PDF format) in all supported languages (except Arabic)
  - Operation Manual (PDF format) in all supported languages (except Arabic)
- Quick Installation Guide in English, French, German, Simplified Chinese and Spanish

Licenses are provided as eLicenses via email.

Technical specifications

System Specifications

Maximum number of workstations simultaneously viewing the same camera	Multicast: 100 Unicast: 5
Supported GUI languages	English, German, Dutch, Italian, Portuguese, French, Spanish, Simplified Chinese, Traditional Chinese, Russian, Hungarian, Japanese, Czech, Danish, Finnish, Greek, Norwegian, Polish, Swedish, Thai, Turkish, Korean, and Arabic
Anti-Virus software must not perform a full-scan. Performance may decrease depending on configuration.	
Event reaction time	<1 second, assuming sufficient network bandwidth
Alarm reaction time (incl. 1 live Image pane, 1 instant playback Image pane and 1 map Image pane):	Maximum 2 seconds, assuming sufficient network bandwidth
Text data	Restrictions for text data written into the Logbook (this applies, if entry is stored only in Logbook, not in recordings): 10*Virtual Input (VI) with length 300 = 3000 characters: 109 items/sec (average) 10 * VI data field with length 800 = 8000 characters: 22 items/sec (average) 10 * VI data field with length 30 = 300 characters: 500 items/sec (average) (item = data input event) Restrictions for text data written into recordings: Bosch VMS can only process up to 3200 Bytes (corresponds to about 3200 English characters in Unicode) per event.

Bandwidth requirements for LAN	Min. 1 Gbps for connections between: Operator Client and Management Server Operator Client and VRM/DiBos Management Server and NVR/VRM/DiBos
Bandwidth requirements for remote access	>= 300kbps
Hardware transcoder	Hardware transcoder VIP-XTCXF-INT or VJT-XTCXF must be configured in VRM, refer to VRM documentation. Hardware transcoding only applicable for VRM connected BVIP cameras. For transcoding live streams it is not required that the respective camera is recording.
Required open ports	See Online Help or Manual for Configuration Client, chapter on used ports.

Management Server Specifications

Maximum number of sustained events	For highest performance server: 500 events/s with Logbook 1000 events/s without Logbook 5000 events/s at peaks with Logbook
Logbook	Supported by SQL Server 2008 R2 SP1 (64-bit version) 4 GB Logbook size
Management Server Redundancy (VMware)	Available with VMware HA. Please contact Bosch Design Engineer for redundancy solutions. The following software versions are used: • ESXi Server 5.1.0 U1 build 1065491 • vCenter Server 5.1.0 U1 build 1064983 Required hardware • 2x DL380p Gen8 Management Server with 8 GB RAM and 4 NICs (one DLxxx for each ESXi server) • 1x DL380p Gen8 Management Server with 8 GB RAM (for Control computer with monitoring) Not necessary if Control computer is installed on ESXi server as virtual machine. Note: For configuration, only a workstation is required. • 1x Bosch DSA E-Series For use with VMware you must install the default NetApp firmware on a DSA E-Series device. The firmware and the manual is available in the Product Catalog of Bosch VMS (**Software & Support**). Required VMware licenses/ Windows licenses • 1x VCS-FND-C VMware vCenter Server 5 Foundation for vSphere up to max. 3 hosts. SNS is required. • 1x VCS-FND-G-SSS-C Basic Support/ Subscription for vCenter Server 5 Foundation for vSphere for 1 year. • 2x VS4-ADV-C VMware vSphere 5 Advanced for 1 processor (max. 12 cores per processor). SNS is required. Included: vShield Zones, Data Recovery, Fault Tolerance, Hot Add, vMotion, Thin Provisioning, High Availability, Update Manager, VCB / Storage APIs, VC Agent, 4-way vSMP, VMware ESXi or VMware ESX, 12 Physical Cores/CPU, 256GB Physical Memory • 2x VS4-ADV-G-SSS-C Basic Support/ Subscription for VMware vSphere. Advanced for 1 processor for 1 year. If current hardware is used, the following licenses must be ordered additionally: • 1x Windows license for: Windows Server 2008 R2 (64 Bit) for control computer and ESXi server. • 3x licenses for 2nd CPU
Management Server Disaster Recovery (Hyper-V)	Hyper-V from Microsoft OS requirement: Windows Server 2012 SR2 (64-bit) with Domain Controller (for HA) Hardware requirements: 2 HP Proliant DL380 PCs with 16 GB RAM and 4 NICs, 200 GB hard disk

Management Server High Availability (Hyper-V)	Hyper-V from Microsoft OS requirement: Windows Server 2012 SR2 (64-bit) with Domain Controller (for HA) Hardware requirements: 2 HP Proliant DL380 PCs with 16 GB RAM and 4 NICs Shared storage for HA: DSA e-Series
Maximum number of Task Schedules	200

VRM Specifications

Version	3.0 Previous versions are not supported. Note that Bosch VMS is not compatible with VRM 3.10!
Maximum count of VRM servers per Management Server	125 (maximum 2000 cameras in total)
Maximum data rate per iSCSI	Please contact Bosch Design Engineer for iSCSI storage solutions.
Max. number of playback sessions	64

Minimum Client Workstation PC Requirements

Operating System	Windows 7 Professional or Ultimate SP1 (64-bit) Windows 8.1 (64-bit, not Windows 8.0!)
CPU	Intel Core i7 4770 3.4 GHz (up to 3.9 GHz)
RAM	Minimum 8 GB
Free disk space	Minimum 3 GB for Single Site Systems Minimum 5 GB for Enterprise Systems We recommend having minimum 15% free disk space.
Network card	1000Base-T
Display Resolution	Minimum per monitor 1024x768 1280x1024 or higher recommended
Recommended Graphic Cards	MHW-AWGC-K2000 MHW-AWGC-K600 MHW-AWGC-K4000 MHW-AWGC-K5000

Maximum Graphic Cards Specifications

Detailed information on the maximum number of Image panes and the CPU load for various workstations or servers and graphic cards in the Application Guide “Display performance indication”.

Minimum Management Server, Mobile Video Service and Configuration Client PC Requirements

Operating System	Windows 2012 Server R2 (64-bit) or Windows 2008 Server R2 SP1 (64-bit) required for > 500 cameras Windows 8.1 (64-bit) Windows 7 Professional or Ultimate SP1 (64-bit) required for Management Server, Configuration Client and Operator Client on the same computer, and maximum 500 IP cameras/encoders
CPU	Intel Core i7 4770 3.4 GHz (up to 3.9 GHz)
RAM	Minimum 8 GB
Free disk space	Minimum 15 GB We recommend having minimum 15% free disk space.
Network card	1000Base-T
Display Resolution	1280 x 1024

Minimum VRM Server PC Requirements

Operating System	Windows 7 Ultimate SP1, Professional Edition SP1 (64-bit) Windows Server 2008 R2 SP1, Standard Edition (64-bit) Windows Storage Server 2008 SP1, Standard Edition (64-bit)
CPU	Six-Core Intel Xeon Processor E5-2620 (2.0 GHz, 6-core, 15 MB, 95 W)
RAM	Minimum 4 GB
Free disk space	500 MB We recommend having minimum 15% free disk space.
Network card	1000Base-T
Display Resolution	1024x768 or higher

Mobile / Web Client Requirements

Link to App Store	www.boschsecurity.com/MobileVideoService
Maximum number of Mobile Video Service instances per Management Server	5
Number of simultaneous connections per Mobile Video Service (1 mobile device consumes 1 connection, each stream consumes another connection)	up to 20

Supported cameras	IP cameras with H.264 or H.263 support that are controlled by Bosch VMS (not controlled by VIDOS) ONVIF cameras BRS/DiBos/DVR cameras
iOS Version for iPhone/iPad	7.1 / 8.1
Hardware version iPad	iPad, iPad 2, iPad 3rd generation
Hardware version iPhone	iPhone 4, iPhone 4S, iPhone 5C
Browser (Web Client)	Internet Explorer 11.0

Device Compatibility

Intrusion panels from Bosch	**GV4 panels:** D9412GV4 (requires v2.x firmware upgrade to support Mode 2) D7412GV4 (requires v2.x firmware upgrade to support Mode 2) **B-Series US1B:** B5512 B4512 B3512 **B-Series US1A:** B9512G B8512G
Barco Monitor Wall Transform A Series	Barco RCPPlusAgent.exe 2.0.6.12 for Barco Monitor Wall
Barco Monitor Wall Transform N Series	Barco RCPPlus-Agent 0.9.0.3
Analog Matrix Switch	Bosch Allegiant series, firmware 8.75 or later and Master Control Software version 2.94
CCTV Keyboard	KBD Universal XF keyboard (USB keyboard) Bosch IntuiKey keyboard, firmware version 1.96
Digital I/O	Digital I/O Advantech ADAM-6050, ADAM-6052, ADAM-6060, ADAM-6066
Digital Video Recorder	DVR 431, 440, 451, 480, 630, 650, 670, 700 series (maximum 15 DVRs per Management Server) Bosch Recording Station 8.10, 8.11 DiBos, firmware version 8.7 Maximum 100 BRS/DiBos recorders per Management Server
USB to Serial adapter	Belkin serial adapter cable F5U103vea
Ethernet to Serial adapter	Comtrol DeviceMaster RTS 4-Port
BVIP Devices	• Flexidome and Dinion 2000/4000/5000/7000/8000/9000 cameras series • MIC 550, 612, MIC7000 cameras with VIDEOJET connect 7000 (supporting alarm inputs and outputs, audio, washer relay, local recording, and playback) • VIP-X Series encoders and cameras • H.264 Series encoders and cameras • MPEG-4, H.264 Main Profile, H. 264 Baseline Plus are supported (H. 264 Baseline and MPEG-2 not supported) Decoder: • VIDEOJET decoder 3000/7000 • VIP XD HD • VIP XD
Connectivity with Building Integration System	Version 3.0 and 4.0
Foyer Card Readers	Maximum 2 readers per Management Server are supported. MINITER 485 is supported.
DTP 3N Box	Allows for connecting maximum 4 ATM devices to your Management Server.
Audio devices	Supported audio formats: • G.711 • L16

Remote Access

Remote Access	Direct iSCSI and encoder replay is not supported.		
	Live	**Playback**	**Control**
VRM	x	x	x
VSG	x	x	x
ONVIF	x (via VSG)	x (via VSG)	x (via VSG)
Local Storage	x	-	x
Live Only	x	-	x
BRS/DiBos	-	-	-
DVR	x	x	x

Ordering information

Demoversion - Non Expandable
Demo license for 3 cameras, 2 workstations (1 with Forensic Search), 2 CCTV keyboards, 2 DVRs
Order number **MBV-BDEM-55**

Lite 32 Edition - Non Expandable
Lite license for 32 Cameras, 2 workstations (1 with Forensic Search), 1 CCTV Keyboard, 1 Mobile Video Service
Order number **MBV-BLIT32-55**

Upgrade BLITE32 to BPro w. 32 channels
License to upgrade an installed Lite-32 Edition to a Professional Edition with 32 channels. **Always** include the computer hardware ID of installed Lite-32 system with the order
Order number **BVMS-LITEPRO-32**

Lite 64 Edition - Non Expandable
Lite license for 64 cameras, 4 workstations (2 with Forensic Search), 2 CCTV Keyboards, 1 Mobile Video Service.
Order number **MBV-BLIT64-55**

Upgrade BLITE64 to BPro w. 64 channels
License to upgrade an installed Lite-64 Edition to a Professional Edition with 64 channels. Always include the computer hardware ID of installed Lite-64 system with the order
Order number **BVMS-LITEPRO-64**

Professional Edition
Base license for Professional Edition. 8 cameras; 2 workstations (1 with Forensic Search); 1 CCTV keyboard; 1 DVR. All MBV-X* and MBV-F* options are only avaialble with Base license
Order number **MBV-BPRO-55**

Enterprise Edition
Base license for Enterprise System. 2 Management Server subsystems (1 required for Enterprise Management); 8 cameras; 2 workstations (1 with Forensic Search); 1 CCTV keyboard; 1 DVR. All MBV-X* and MBV-F* options are only avaialble with Base license
Order number **MBV-BENT-55**

Enterprise Upgrade for Pro
Upgrade license to expand a Professional Edition base license to an Enterprise System base license
Order number **MBV-FEUP-55**

1 Channel Expansion
Expansion license for 1 encoder/decoder channel. Order the exact number required
Order number **MBV-XCHAN-55**

1 Workstation Expansion
Expansion license for 1 workstation (each extra workstation requires 1 license). Forensic Search licenses must be ordered separately
Order number **MBV-XWST-55**

1 DVR Expansion
Expansion license for 1 DVR. Order the exact number required
Order number **MBV-XDVR-55**

1 CCTV Keyboard Expansion
Expansion license for 1 CCTV keyboard. Order the exact number required
Order number **MBV-XKBD-55**

1 Forensic Search Expansion
Expansion license for 1 Forensic Search (one license is required per Workstation, not per camera or encoder)
Order number **MBV-XFOREN-55**

1 Enterprise Subsystem Expansion
Expansion license to add 1 Management Server to the Enterprise System as a member of this system
Order number **MBV-XSUB-55**

1 Mobile Video Service Expansion
Expansion license for 1 Mobile Video Service.
Order number **MBV-XMVS-55**

Allegiant Matrix Connection
Expansion license to connect 1 Allegiant Matrix to a Management Server
Order number **MBV-FALG-55**

ATM/POS Connection
Expansion license to integrate ATM/POS devices
Order number **MBV-FATM-55**

OPC Server Connection for BIS
Expansion license to integrate a Building Integration System (BIS).
Order number **MBV-FOPC-55**

Intrusion Panel
Expansion license to integrate intrusion panel devices
Order number **MBV-XINT-55**

Dual Recording VRM Expansion
Expansion license for 1 encoder channel used for dual recording
Order number **MBV-XDUR-55**

Failover VRM Expansion
Expansion license for 1 encoder channel used with a Failover VRM
Order number **MBV-XFOV-55**

Base Box
Boxed set for Professional Edition containing DVD (with Setup software) and Quick Installation Guide (in English, French, German, Simplified Chinese and Spanish). License must be ordered separately
Order number **MBV-BBOX**

Expansion Box
Setup DVD for expansion options. Licenses must be ordered separately and are not delivered with the DVD
Order number **MBV-XBOX**

Accessories

KBD-Universal XF Keyboard
USB CCTV-oriented keyboard for use with Bosch Video Management System, BIS - Video Engine, or DIVAR IP systems
Order number **KBD-UXF**

Services

Maintenance Lite-32-Edition
One year of maintenance cover for the Lite-32 license
Order number **MBV-MLIT32**

Maintenance Lite-64-Edition
One year of maintenance cover for the Lite-64 license
Order number **MBV-MLIT64**

Maintenance Professional Edition
One year of maintenance cover for the Professional Edition base license
Order number **MBV-MPRO**

Maintenance Enterprise Edition
One year of maintenance cover for the Enterprise Edition base license
Order number **MBV-MENT**

Maintenance Enterprise Upgrade for Pro
One year of maintenance cover for the upgrade license from Pro to Enterprise
Order number **MBV-MEUP**

Maintenance Channel Expansion
One year of maintenance cover for the channel expansion license
Order number **MBV-MCHAN**

Maintenance DVR Expansion
One year of maintenance cover for the DVR expansion license
Order number **MBV-MDVR**

Maintenance Workstation Expansion
One year of maintenance cover for the Workstation expansion license
Order number **MBV-MWST**

Maintenance CCTV Keyboard Expansion
One year of maintenance cover for the CCTV keyboard expansion license
Order number **MBV-MKBD**

Maintenance Forensic Search Expansion
One year of maintenance cover for the Forensic Search expansion license
Order number **MBV-MFOREN**

Maintenance Enterprise Subsystem
One year of maintenance cover for an Enterprise Subsystem expansion license.
Order number **MBV-MSUB**

Maintenance Mobile Video Service
One year of maintenance cover for the Mobile Video Service expansion license
Order number **MBV-MMVS**

Maintenance Allegiant Matrix Connection
One year of maintenance cover for an Allegiant Matrix expansion license
Order number **MBV-MALG**

Maintenance ATM/POS Connection
One year of maintenance cover for an ATM/POS expansion license
Order number **MBV-MATM**

Maintenance Intrusion Panels
One year of maintenance cover for an intrusion panel expansion license
Order number **MBV-MINT**

Maintenance OPC Server Connection
One year of maintenance cover for the OPC Server Connection expansion license
Order number **MBV-MOPC**

Maintenance Failover VRM
One year of maintenance cover for a Failover VRM expansion license.
Order number **MBV-MFOV**

Maintenance Dual Recording VRM
One year of maintenance cover for a Dual Recording VRM expansion license.
Order number **MBV-MDUR**

Maintenance Lite-32-Edition
Three years of maintenance cover for the Lite-32 license
Order number **MBV-MLIT32-3YR**

Maintenance Lite-64-Edition
Three years of maintenance cover for the Lite-64 license
Order number **MBV-MLIT64-3YR**

Maintenance Professional Edition
Three years of maintenance cover for the Professional Edition base license
Order number **MBV-MPRO-3YR**

Maintenance Enterprise Edition
Three years of maintenance cover for the Enterprise Edition base license
Order number **MBV-MENT-3YR**

Maintenance Enterprise Subsystem Expansion
Three years of maintenance cover for the Enterprise Subsystem expansion license
Order number **MBV-MSUB-3YR**

Maintenance Enterprise Upgrade for Pro
Three years of maintenance cover for the upgrade license from Pro to Enterprise
Order number **MBV-MEUP-3YR**

Maintenance Channel Expansion
Three years of maintenance cover for the channel expansion license
Order number **MBV-MCHAN-3YR**

Maintenance DVR Expansion
Three years of maintenance cover for the DVR expansion license
Order number **MBV-MDVR-3YR**

Maintenance Workstation Expansion
Three years of maintenance cover for the Workstation expansion license
Order number **MBV-MWST-3YR**

Maintenance CCTV Keyboard Expansion
Three years of maintenance cover for the CCTV keyboard expansion license
Order number **MBV-MKBD-3YR**

Maintenance Forensic Search Expansion
Three years of maintenance cover for the Forensic Search expansion license
Order number **MBV-MFOREN-3YR**

Maintenance Mobile Video Service
Three years of maintenance cover for the Mobile Video Service expansion license
Order number **MBV-MMVS-3YR**

Maintenance Allegiant Matrix Connection
Three years of maintenance cover for an Allegiant Matrix expansion license
Order number **MBV-MALG-3YR**

Maintenance ATM/POS Connection
Three years of maintenance cover for an ATM/POS expansion license
Order number **MBV-MATM-3YR**

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